

AMENDMENTS TO THE CLAIMS

Claims 1-6 (Cancelled).

7. (Currently Amended) A substrate processing apparatus, comprising:

a loading/unloading area for carrying in and out a substrate;

a cleaning area for cleaning the substrate; and

a plating area for plating the substrate,

wherein the cleaning area is provided with a pre-cleaning unit including a vessel housing a first treatment liquid spraying section for cleaning the substrate before plating in the plating area by bringing a first treatment liquid into contact with the substrate, a lid member for closing ~~the~~ an opening of the vessel after the substrate held in a substrate holding device is moved to above the opening, and a second treatment liquid spraying section mounted on the lid member for cleaning the substrate by bringing a second treatment liquid into contact with the substrate while the opening of the vessel is closed with the lid member.

Claim 8 (Cancelled).

9. (Currently Amended) A substrate processing apparatus, comprising:

a loading/unloading area for carrying in and out a substrate;

a cleaning area for cleaning the substrate; and

a plating area for plating the substrate,

wherein the plating area is provided with a first pretreatment unit and a second pretreatment unit, each unit including a vessel housing a first treatment liquid spraying section for pretreating the substrate before plating by bringing a first treatment liquid into contact with the substrate, a lid member for closing ~~the~~ an opening of the vessel after the substrate held in a substrate holding device is moved to above the opening, and a second treatment liquid spraying section mounted on the lid member for cleaning the substrate by bringing a second treatment

liquid into contact with the substrate while the opening of the vessel is closed with the lid member.

10. (Currently Amended) A substrate processing apparatus, comprising:

a loading/unloading area for carrying in and out a substrate;

a cleaning area for cleaning the substrate; and

a plating area for plating the substrate,

wherein the plating area is provided with a plating unit including a processing tank for holding a plating solution, a lid member for closing ~~the~~ an opening of the processing tank after the substrate held in a substrate holding device is moved to above the opening, and a treatment liquid spraying section mounted on the lid member for cleaning the substrate by bringing a cleaning liquid into contact with the substrate while the opening of the processing tank is closed with the lid member.

Claims 11-17 (Cancelled).

18. (Currently Amended) A substrate processing apparatus, comprising:

a loading/unloading area for carrying in and out a substrate;

a cleaning area for cleaning the substrate; and

a plating area for plating the substrate,

wherein the plating area is provided with a plurality of plating units, each plating unit including a processing tank for holding a plating solution, a lid member for closing ~~the~~ an opening of the processing tank after the substrate held in a substrate holding device is moved to above the opening, and a treatment liquid spraying section mounted on the lid member for cleaning the substrate by bringing a cleaning liquid into contact with the substrate while the opening of the processing tank is closed with the lid member.

19. (Currently Amended) A substrate processing apparatus, comprising:

a loading/unloading area for carrying in and out a substrate;
a cleaning area for cleaning the substrate; and
a plating area for plating the substrate,

wherein the cleaning area ~~is provided with~~ includes a pre-cleaning unit for cleaning the substrate before plating in the plating area, the plating area ~~is provided with~~ including a pretreatment unit for pretreating the substrate before plating by bringing a treatment liquid into contact with the substrate, and the plating area ~~is provided with~~ including a plating unit for plating the pretreated substrate, and a plurality of spray nozzles for spraying a treatment liquid ~~for treatment or cleaning of onto~~ a processing surface of the substrate are mounted in ~~at least one of said units~~ the pretreatment unit, said spray nozzles being disposed such that the treatment liquid ~~for treatment or cleaning~~ can be sprayed uniformly onto the entire processing surface of the substrate.

Claims 20-22 (Cancelled).

23. (Currently Amended) A substrate processing apparatus, comprising:

a loading/unloading area for carrying in and out a substrate;
a cleaning area for cleaning the substrate; and
a plating area ~~provided with~~ including:

a plating unit for plating the substrate, the plating unit including a processing tank for holding a plating solution, the processing tank having a circumferential overflow groove to receive the plating solution overflowing from the processing tank; and

wherein the plating area is provided with a plating solution supply device including a plating solution supply pump for supplying a plating solution to the plating unit by a plating solution supply pump which is, the plating solution supply pump comprising a vertical centrifugal pump and being arranged to circulate the plating solution from the overflow groove to the processing tank.

Claims 24-27 (Cancelled).

28. (Currently Amended) A substrate processing apparatus, comprising:
a loading/unloading area for carrying in and out a substrate;
a cleaning area for cleaning the substrate; and
a plating area for plating the substrate, ~~wherein the plating area is provided with~~ including
a plating unit for plating a processing surface of the substrate ~~by bringing a plating solution into~~
contact with, the plating unit being operable to insert the substrate into a processing tank so as to
bring the processing surface into contact with a plating solution stored in the ~~while the substrate~~
~~is inserted in a processing tank[,]; and~~
a spray nozzle in the processing tank of the plating unit, the spray nozzle being arranged
for spraying to spray a cleaning liquid onto the surface of the substrate after plating so as to
remove the plating solution remaining on the processing surface of the substrate is provided in
~~the processing tank of the plating unit.~~

29. (Currently Amended) A substrate processing apparatus, comprising:
a loading/unloading area for carrying in and out a substrate;
a cleaning area for cleaning the substrate; and
a plating area for plating the substrate,
wherein the cleaning area ~~is provided with~~ includes a pre-cleaning unit ~~for housing in a~~
having a pre-cleaning vessel for housing the substrate before plating in the plating area and
cleaning, the pre-cleaning unit being operable to clean the substrate before plating in the plating
area, and
the plating area ~~is provided with~~ includes a pretreatment unit ~~for housing in a~~ having a
pretreatment vessel for housing the substrate cleaned in the pre-cleaning unit and pretreating, the
pretreatment unit being operable to pretreat the substrate,
wherein at least one of the pre-cleaning vessel and the pretreatment vessel has a spray
nozzle for internal cleaning of the at least one of the pre-cleaning vessel and the pretreatment

~~vessel is provided within the vessel of the pre-cleaning unit and/or within the vessel of the pretreatment unit, the spray nozzle being arranged to spray a cleaning liquid in a circumferential direction of the at least one of the pre-cleaning vessel and the pretreatment vessel.~~

Claims 30-32 (Cancelled).

33. (Currently Amended) A substrate processing apparatus, comprising:
a loading/unloading area for carrying in and out a substrate;
a cleaning area for cleaning the substrate; and
a plating area for plating the substrate,
wherein the plating area is provided with a pretreatment unit for pretreating the substrate before plating by bringing a treatment liquid into contact with the substrate, said pretreatment unit, including;
a processing tank for holding a plating solution,
a lid member for closing ~~the~~ an opening of the processing tank after the substrate held in a substrate holding head is moved to above the opening, and
a treatment liquid spraying section mounted on the lid member for spraying a cleaning liquid onto the substrate to clean the substrate while the opening of the processing tank is closed with the lid member, said substrate fixing head being provided with a tilting mechanism.

Claims 34-71 (Cancelled).

72. (New) The substrate processing apparatus according to claim 19, wherein the pretreatment unit comprises a catalyst-imparting unit.

73. (New) The substrate processing apparatus according to claim 19, wherein the pretreatment unit comprises a chemical cleaning unit.

74. (New) The substrate processing apparatus according to claim 19, wherein the spray nozzles are arranged to simultaneously spray the treatment liquid uniformly onto the entire processing surface of the substrate at one time.

75. (New) The substrate processing apparatus according to claim 23, wherein the plating solution supply device includes a storage tank and a heating section for heating the plating solution in the storage tank.